

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/732,705

2. (Once amended) A speaker system according to claim 1, wherein the amplitude detecting means comprises:

velocity detecting means for detecting a velocity of the diaphragm of the speaker to produce a velocity signal; and

integrating means for integrating the velocity signal to produce the amplitude signal.

Please add following new claims

*a1* 4. A speaker system according to claim 3, wherein the velocity detecting means detects the velocity based on a voltage applied to the speaker and a current flowing through the speaker.

*a2* 5. A speaker system comprising:

a speaker,

a detecting circuit which detects an operational characteristic of a diaphragm of the speaker and outputs a corresponding detection signal;

a low pass filter which integrates the detection signal to generate an amplitude signal; and  
a positive feed back circuit which positively feeds back the amplitude signal into a driving signal for driving the speaker,

wherein the low pass filter has a cutoff frequency that is lower than a lowest resonance frequency of the speaker.

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6. A speaker system according to claim 5, wherein the detecting circuit detects the operational characteristic based on a voltage applied to the speaker and a current flowing through the speaker.

7. A speaker system according to claim 5, wherein the operational characteristic comprises velocity.

*A<sup>2</sup>*  
*cont*

8. A speaker system comprising:  
a speaker,  
a detecting circuit which detects an operational characteristic of a diaphragm of the speaker and outputs a corresponding detection signal, wherein the detecting circuit detects the operational characteristic based on a voltage applied to the speaker and a current flowing through the speaker;

a low pass filter which integrates the detection signal to generate an amplitude signal; and  
an positive feed back circuit which positively feed backs the amplitude signal into a driving signal for driving the speaker.

9. A speaker system according to claim 8, wherein the low pass filter has a cutoff frequency that is lower than a lowest resonance frequency of the speaker.

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10. A speaker system according to claim 8, wherein the operational characteristic comprises velocity.
11. A speaker driving method comprising;  
detecting an operational characteristic of a diaphragm of a speaker;  
producing a detection signal based on said operational characteristic;  
integrating the detection signal to produce an amplitude signal;  
positively feeding back the amplitude signal into a driving signal for driving the speaker.
- a<sup>2</sup>*  
*cont*
12. A speaker driving method according to claim 11, wherein the detection signal is integrated by a low pass filter having a cutoff frequency that is lower than a lowest resonance frequency of the speaker.
13. A speaker driving method according to claim 11, wherein the operational characteristic is detected based on a voltage applied to the speaker and a current flowing through the speaker.
14. A speaker driving method according to claim 11, wherein the operational characteristic comprises velocity.
15. A speaker driving method comprising: